

2006
Annual Report

Centre County
Pennsylvania Senior Environment Corps
(PaSEC)

Produced by Centre County PaSEC
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Meetings
2nd Wednesday of each month at 9:30 a.m.

Who We Are

Centre County Chapter of PaSEC was formed in 2002 as a cooperative effort of the Retired & Senior Volunteer Program (RSVP), the Centre County Conservation District, and the Centre County Office of Aging.

Currently we have 48 volunteers, with four Designated Trainers in chemical/visual assessment and one in habitat assessment. Our volunteers monitor streams on a monthly basis for pH, specific conductance, nitrates, dissolved oxygen, sulfates, and total alkalinity. Total phosphates are monitored and macroinvertebrate collection and identification done twice/year for most streams.

Our Designated Trainers provide ongoing training in chemical/physical, habitat, and macroinvertebrate sampling. Two of our members are Volunteer Technical Coordinators who assist in training trainers and provide technical support as needed.

Our members serve on 11 sampling teams, which monitor 10 Centre County streams at 23 sites, and 3 Quality Control teams, which do duplicate sampling and lead quality control workshops throughout the year. Our chapter conducted over 200 monitoring events, gave over 1700 hours of time, and at a rate of \$18/hour contributed roughly \$30,600 in volunteer resources to protect and improve Centre County's environmental resources during the year.

Centre County PaSEC has partnered with Centre County Conservation District, ClearWater Conservancy, Bald Eagle Creek Watershed Association, Penns Valley Conservation Association (PVCA), and Trout Unlimited to bring educational and training opportunities to our members.

In addition to collection of stream data, our members led various environmental education activities.

Mission Statement

The mission of Centre County PaSEC is to support Teams to gather data on and create awareness of the quality of water in the streams of the county by monthly monitoring of as many county streams as possible. Through public outreach, with the support of EASI and the Centre County Conservation District and as an arm of Centre County RSVP, Centre County PaSEC seeks to keep the public informed of the importance of clean water and how the management of civil and natural resources affects the quality of streams in the county.

Background

In 1997, Pennsylvania was the first state to establish a Statewide Senior Environment Corps (PaSEC) under a partnership among the PA Department of Aging, PA Department of Environmental Protection (DEP), and the Environmental Alliance for Senior Involvement (EASI). The PaSEC has been recognized by the United Nations Environment Programme and the President's Council on Sustainable Development as the best model civic engagement program. EASI established the Senior Environment Corps concept in the belief that older Americans have the talent, time and experience to tackle some of the most important environmental concerns in their communities. Today, EASI is the largest senior environmental action network in the world and continues to provide technical assistance and support to the PaSEC.

How Our Water Quality Monitoring Data is Used

Buffalo Run Watershed

Our members monitor Buffalo Run near the Engineered Rock Placement Area

(ERPA), a depository for pyritic rock uncovered during construction of the I-99 highway in the Skytop area. The sites' locations are providing baseline data for water quality prior to the deposition of the pyritic rocks. Members will continue to monitor these sites for any possible contamination resulting from the ERPA site.

Sinking Creek Watershed

Data collected from our Sinking Creek team is used to monitor the health of the Sinking Creek upstream and downstream of the wastewater discharge pipe of Hanover Foods Corp. in Potter Township. In 2004, a large fish kill and stream damage to Sinking Creek occurred due to pollution discharge from the wastewater pipe. Wastewater discharge contained high levels of suspended solids causing extremely low levels of dissolved oxygen in the creek. Ongoing monitoring of these sites continues in order to detect any additional pollution events which might occur from the plant.

Spring Creek Watershed

Data collected by one of our new monitoring teams for Spring Creek in the Spring Creek Canyon area on State Correctional Institution at Rockview land provide baseline water quality data. This area of Spring Creek is very highly regarded for trout fly-fishing and is to be released from prison control and opened to the public for as yet to be determined usage.

Data from Spring Creek where it enters and exits the Elks Club property serves to monitor water quality to determine if the area continues to qualify for listing as a Cooperative Sanctuary through Audubon International for golf courses. This arrangement was made through contact with the Centre County Conservation District Watershed Specialist. Centre County PaSEC tests there twice a year.

Bald Eagle Creek Watershed

Data from Centre County chapter of PaSEC monitoring of Bald Eagle Creek (BEC) was used in a presentation at a meeting to determine the feasibility of forming a new watershed association for the mid BEC. We presented 5 years of chemical data from the upstream range of the watershed under consideration which was well received. As a result, the watershed association was formed and two of its members joined our PaSEC chapter. They formed a new monitoring team for the Bald Eagle Creek/Spring Creek area in the Borough of Milesburg.

Major Accomplishments in 2006 **Educational Presentations, Public Outreach, and Networking with Environmental Associations**

To further our mission, Centre County Chapter of PaSEC presented several environmental education and public outreach activities during 2006.

■ Two members presented an education program for the Marion Walker fifth graders at a stream at the Seven Mountains Scout Camp. They conducted five two part lessons---one part in water chemistry and one on macroinvertebrate identification.

■ Members taught a class on water monitoring, chemical analysis, and biological monitoring at Laurel Haven Environmental Center for the Community Academy of Lifelong Learning (CALL) of Centre County. The annual class provides the public with the opportunity to learn about water quality, chemical analysis, and macroinvertebrate surveying to assess the health of our streams.

■ Our PaSEC chairman serves on the PVCA board providing a networking opportunity for our chapter. He presented a PaSEC display at their Crickfest and held sales of a book written for PVCA because of this board association.

■ One of our members conducted a field day presentation working with the PVCA- funded Environmental Education Coordinator at Penns Valley Area School District's Environmental Center.

■ One PaSEC member is a member of the Beech Creek Watershed Association.

■ Two members serve on the Land Preservation and Conservation Committee of ClearWater Conservancy.

■ Five members of our chapter represented Centre County PaSEC during Spring Creek Day Family Festival at Millbrook Marsh Nature Center. A display was presented containing information on our chapter's activities and website. Members also manned an educational station using a Digital Blue QX5 Computer Microscope to help attendees identify, examine, photograph, and film live macroinvertebrates.

■ The Centre County PaSEC website was published as a recruiting, educational, and informational tool for our chapter and the public. The site includes our Teams and Trainers list, stream site and team photos, Latest News and Upcoming Events, Topographical Maps of our sites with GPS coordinate locations marked, a Photo Gallery with photos of our activities, Frequently Asked Questions, Forms which new recruits and members use, Monitoring Data Sheets and Graphs, with a link to our data on EASI's MonitorAnything Database, and Links to sites with related missions. Since its inception, the site has had over 2575 page views. The top three areas viewed are the "Home" page, the Photo Gallery pages, and the Latest News and Upcoming Events page.

■ At the annual picnic with Clearfield County PaSEC at Black Moshannon State Park, members of both PaSECs networked

and participated in an educational pontoon boat tour of the lake. Beaver habitat was observed and lake water quality, plant life, and bird habitat were observed and discussed.

■ Members identifying themselves as "water monitors" promoted responsible use of lands to be released from the State Correctional Institution at Rockview control. This land includes Spring Creek Canyon, a renowned fly-fishing stream. Members, in support of responsible use, sent letters to legislators, Penn State, and township and county officials.

Quality Control and Training

In 2006, Centre County PaSEC launched an initiative emphasizing quality control and training.

■ Three Quality Control (QC) Teams were formed that provide duplicate testing, visiting monitoring team sites on a semi-annual basis, assess team monitoring techniques, and compare chemical test results with those teams. Ten duplicate testing sessions were completed.

■ QC Teams shared findings, and reviewed EASI protocols and VTC recommendations at monthly meetings of the membership.

■ Meetings were held with the State College Borough Water Authority to arrange for testing of duplicate samples from some of our sites by its certified lab for comparison to our test results. We will begin to do this periodically to verify that our data is credible.

■ Semi-annual Standardization Workshops were instituted. Members attended Quality Control Standardization Workshops in September and April. One workshop included a Colorimeter demonstration for nitrates testing. Members

tested standard solutions with chemicals from their test kits to assess the accuracy of their testing methods and the efficacy of their test chemicals. Members identified and discarded outdated powder pillows. New pillows were distributed, ordering new ones as needed equally for each site. NitraVer 6 powder pillows from the defective lot identified by EASI were replaced, after testing the pillows and determining that they produced low, unacceptable results. Conductivity and pH meter batteries were tested, replacing weak ones, and meters were recalibrated using standard solutions. Monthly, quarterly, and annual protocols for recalibrating instruments and testing chemicals were recommended.

■ One of our members attended the North Central Regional Watershed Meeting where a presentation on assessing ecological conditions in Central Pennsylvania watersheds through songbirds was given. The group was briefed about the changes in the DEP watershed management program.

■ Members attended a demonstration of electro-shock fishing to collect samples for weighing, measuring, and recording. A macroinvertebrate collection procedure using a knick-net was demonstrated. Specimens collected could be used for biosurvey identification and population count purposes.

■ One of our Designated Trainers conducted a training session in chemical analysis for four of our new members.

■ One of our members attended a MonitorAnything Database training workshop sponsored by EASI. The developer of the database gave hands-on training on how to enter data and display reports. Two new additions to the database were automatic calculation of water quality value from data input in the Biosurvey Report and the ability to produce a satellite

picture of the location of each monitoring site. This member wrote an article on the training which was published on our website.

■ Four Centre County PaSEC members attended a Volunteer Technical Coordinator training session sponsored by EASI, PaSEC, and the DEP in March. They received training on how to teach QA/QC and the Quality Assurance Project Plan to groups. A report was presented to chapter members at a subsequent meeting.

■ Fourteen members attended a Macroinvertebrate Collection and Identification Workshop in May. Collection and population count protocols were reviewed. Members examined and identified macros with the help of the Water Resources Coordinator from ClearWater Conservancy and the Project Manager for West Branch Susquehanna Restoration Initiative of Trout Unlimited. A Digital Blue QX5 Computer Microscope was used for detailed study and photographing of macros. Photographs of the macros were published on our website.

We Welcome You – Volunteers Needed!

Our chapter of PaSEC is continually looking for new members who are interested in the water quality of the streams of Centre County. We welcome volunteers who would like to take an active role in water monitoring and/or educating the public on the importance of water quality and managing this vital resource. We are a diverse group of people from various backgrounds working toward these goals. Many of us have no scientific background and no previous experience in the environmental arena. Please call the RSVP/PaSEC office (see cover page) for more information or visit our website:

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